

(12) United States Patent

Shipman et al.

(54) SYSTEMS AND APPARATUSES FACILITATING A DO-IT-YOURSELF **EXPERIENCE-BASED REPAIR SOLUTION**

(71) Applicant: AutoZone Parts, Inc., Memphis, TN

(US)

Inventors: Michael Paul Shipman, Collierville, (72)

TN (US); F. Scott Brown, Germantown, TN (US); Destry J. Withers, Millington, TN (US); Howard Bryson Morgan, Arlington, TN (US)

Assignee: AutoZone Parts, Inc., Memphis, TN

(US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35 U.S.C. 154(b) by 709 days.

(21) Appl. No.: 15/450,486

(22)Filed: Mar. 6, 2017

(65)**Prior Publication Data**

US 2017/0262815 A1 Sep. 14, 2017

Related U.S. Application Data

- Provisional application No. 62/305,643, filed on Mar. 9, 2016.
- (51) **Int. Cl.** G06Q 30/06 (2012.01)G06Q 10/00 (2012.01)G06Q 10/08 (2012.01)
- (52)U.S. Cl. CPC G06O 10/20 (2013.01); G06O 10/0875 (2013.01); *G06Q 30/0631* (2013.01); *G06Q* **30/0641** (2013.01)
- (58) Field of Classification Search CPC G06Q 10/20; G06Q 10/0875; G06Q 30/0631; G06Q 30/0641; G06Q 30/0601-0641

(Continued)

US 11.093,906 B2 (10) Patent No.:

(45) Date of Patent: Aug. 17, 2021

(56)References Cited

U.S. PATENT DOCUMENTS

7,620,484 B1 11/2009 Chen 12/2009 Wolery et al. 7,636,676 B1 (Continued)

OTHER PUBLICATIONS

Roanes-Lozano, Eugenio, José Luis Galán-García, and Gabriel Aguilera-Venegas. "A portable knowledge-based system for car breakdown evaluation."; Applied Mathematics and Computation;267 (2015): 758-770. (Year: 2015).*

(Continued)

Primary Examiner — Resha Desai Assistant Examiner — Elisa H Yang (74) Attorney, Agent, or Firm - Alston & Bird LLP

(57)ABSTRACT

Embodiments are disclosed for facilitating Do-It-Yourself (DIY) repairs. In the context of a method, an example embodiment includes receiving, by an experience-based repair service (EBRS) host system, vehicle diagnostic information identifying one or more vehicle problems. This example embodiment of the method further includes evaluating the vehicle diagnostic information, generating, based on the evaluation of the vehicle diagnostic information, required part types and required tools for addressing the one or more vehicle problems, and generating, based on the evaluation of the vehicle diagnostic information, recommended part types for addressing the one or more vehicle problems. Finally, this example embodiment of the method further includes causing presentation of an interface facilitating purchase of required parts from each of the generated required part types, the required tools, and recommended parts from each of the generated recommended part types. Corresponding apparatuses and computer program products are also provided.

15 Claims, 16 Drawing Sheets

